Health, stress, coherence

(Zdrowie, stres, koherencja)

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Abstract – The authors characterized selected issues regarding stressors, they paid attention to the body's response to these factors. They discussed the physiological effects of stress, as well as psychological reactions to stress. They emphasized that stress can affect the quality and safety of human functioning, modify the level of emotions and cognitive levels, can limit flexibility in action, building rigid patterns of behavior. Among the factors associated with good health and treated as key in the fight against stress, is described by A. Antonovsky - a sense of coherence. The next part of the work discusses the main assumptions of the salutogenetic theory and its importance for the fight against stress.

Key words - stress, stress reaction, sense of coherence.

Streszczenie – Autorzy scharakteryzowali wybrane zagadnienia dotyczące stresorów, zwrócili uwagę na kształtowanie się reakcji organizmu na działanie tych czynników. Omówili fizjologiczne skutki stresu, a także reakcje psychologiczne na stres. Podkreślili , że stres może wpływać na jakość i bezpieczeństwo funkcjonowania człowieka, modyfikować poziom emocji i poziom poznawczy, może ograniczać elastyczność w działaniu, budując sztywne wzorce zachowań. Wśród czynników wiązanych z dobrym zdrowiem i traktowanych jako kluczowe w walce ze stresem, znajduje się opisane przez A. Antonovsky'ego - poczucie koherencji. W dalszej części pracy omówiono główne założenia teorii salutogenetycznej i jej znaczenie dla walki ze stresem.

Słowa kluczowe - stres, reakcja stresowa, poczucie koherencji.

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I. ROLE OF STRESSORS

Stress is an inseparable element of our life. It accompanies us both in moments of positive and negative events. Most often, however, it is associated with an unpleasant reaction of the body, tension, and danger. Stress can be defined as [1,2]:

- Stress as a stimulus - annoying, disturbing and detracting from activity: this category tries to describe various unpleasant situations that cause stress, eg noise in the workplace, unpleasant incidents of expulsion or illness.
- Stress as a reaction to an unpleasant stimulus from the external environment: this category attempts to describe the reactions that appear in the body and

mind of a person in response to unpleasant situations, eg worse performance of the task.

- Stress as a dynamic relationship between a person and the environment - which can be assessed by the individual or as requiring a specific adaptive effort, or exceeding the ability to meet it.

In a stressful situation, there is always a stimulus or stressor, which is the most common element of danger, frustrating the action, affecting the strong emotional arousal. The stress reaction can be considered on four levels: emotional, physiological and behavioral cognitive. It can be illustrated graphically using the SOR model.

Figure 1. The SOR model [3,4]

The body's response (stress reaction) to the stressor / stressors relates to physiological and psychological reactions. [1,2,5,6]

In the physiological reaction described by Selyego, there is a set of non-specific physiological changes. These changes are local in nature due to local stimulus (LAS) and systemic effects caused mainly by the adrenal gland axis (general adaptation syndrome - GAS). [7]

The GAS team consists of three principal reaction steps, characterized in Table 1.

Table 1. General adaptation syndrome (GAS) - stages [5,6,7]

Reaction stages	Process
Alarm reaction	shock phase, which includes the initial direct effect of a harmful agent on the body; in addition to specific changes (eg tissue destruction), the body reacts with specific non-specific physiological changes (e.g., decrease in blood pressure and body temperature) - shock prevention phase (mobilization), which involves active defense efforts to cope with stress (eg increased blood pressure and body temperature)
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Resistance reaction	phase of relative adaptation; the symptoms that occurred in the first stage disappear, although the disturbing situation persists; the body tolerates harmful factors that have been working for some time, but tolerates other stimuli (previously harmless) less well; adapts to the existing situation and begins to resist
Exhaustion reaction	occurs when harmful stressors continue to function; on the physiological level, we observe an increase in generalized arousal of the body, which is not used to combat stress (it lost its defense capabilities); dysfunction of physiological functions and decrease of defensive abilities of the organism occur; the stage of exhaustion can lead to illness, and with further stress, in extreme cases, even to death

Table 2. Physiological effects of stress [5]

Autonomic nervous system	
parasymphatetic	symphatetic
narrowing of pupils	Widening of pupils
stimulates the secretion of abundant, watery saliva	stimulates the secretion of thick saliva
Constricts the bronchi	Dilates the bronchi
relieves heart activity	speeds up heart activity
stimulates peristalsis of the stomach and secretion of juice	inhibits stomach peristalsis and secretion of juice
stimulates the secretion of the pancreas	inhibits pancreatic secretion
	stimulates the secretion of adrenaline and noradrenaline
stimulates intestinal peristalsis	inhibits intestinal peristalsis
causes bladder contraction	inhibits bladder contraction

However, when the action of stressors is too intense or too long, it becomes dangerous for the body. Then it can cause: apathy or anxiety, inability to act effectively, and even physical ailments. The boundary between these states is constructed very individually; depends on personality, character traits, often from previous experience and current life situation. [15]

Hence also stands out [16,17]:

- distress - arising as a result of negative emotions, associated with the threat,
- eustress - positive stress, helping to solve a difficult situation.

II. CONCEPT OF COHERENCE A STRESS

The sense of coherence is called as a comprehensive human orientation, showing the degree to which the patient has a dominant, persistent, but dynamic sense of certainty that the stimuli that flow from the external and internal environment during life are of an explicable and predictable nature. Coherence metaphorically is presented as a key to health. Coherence affects the level of health assessed subjectively and objectively. There are resources that are conducive to the requirements of these stimuli, and these requirements are a challenge deemed worth worth of effort and commitment [8,18].

Among the factors associated with good health and treated as key in the fight against stress, there is a description of coherence (sense of coherence) described by A. Antonovsky (1995, 1997). He presented them as part of the salutogenetic theory. [19,20]

Antonovsky defined the sense of coherence "general orientation, expressing to what extent man has a striking, persistent, but dynamic conviction about the predictability of the internal and external environment and the fact that, with high probability, the matter will accept such a successful turnover, which can be expected on the basis of rational premises" [19]. An attitude of this belief is "... a dynamic sense of certainty that: (1) the stimuli that flow from the internal and external environment throughout life are of a structured, predictable and explainable nature; (2) resources are available that will allow him to meet the demands of these stimuli; (3) these requirements are a challenge to him that is worth the effort and commitment "[19].

Each of us is under the influence of numerous stimuli (stressors) that modify the dynamic balance of life processes at an optimal level and try to adapt to them. According to Antonovsky, it should be assumed that between health and illness in general, there is a balance of states, which should be understood as a whole, as a dynamic process of balancing requirements and resources in the course of an impact with stress. Health processes rely on the utilization of the energy accumulated by man to deal with external and internal requirements without greatly disturbing the dynamic equilibrium. In the salutogenetic theory, the recognition of health makes it easier to determine health states. Antonovsky's health effects are evaluated by objective and subjective indicators. The degree of health according to Antonovsky depends on the correlation of four factors: the accumulated immune resources, the existing stressor, the sense of coherence and the lifestyle and behavior of the person. The components of the sense of coherence include a sense of intelligibility, sense and steerability, in other words resourcefulness. The sense of intelligibility is the degree to which a person perceives and receives stimuli coming from the external and internal environment and with which he can cope. They are information that a person perceives as coherent, orderly and such, thanks to which they feel that a given event can understand and predict. By the sense of meaningfulness is meant the motivation, or the degree in which a person feels that life makes sense through the emotional context. This motivation gives us the belief that although some of the problems and struggles resulting from life are worth the effort, sacrifice and general commitment. This factor is called motivational and emotional. Patients with a high sense of meaningfulness look for meaning, are willing to take challenges

and make an effort to deal with and deal with problems. Resourcefulness is the level in which the patient perceives available resources to meet the requirements of life. It is the conviction that a resource is available to man, although it does not really have to be his property. The resourcefulness is that man, although he does not own these resources, is able to reach out to other external sources, such as God or sacrum. With a sense of resourcefulness, a person does not feel helpless, knows that he is able to overcome difficulties and solve all problems. The components of the sense of coherence remain with each other in a clear relationship. It is recognized that the sense of meaningfulness is the most important and when it is strong, other elements tend to grow. However, when the sense is weak, the rest has a downward trend [16,18,21]. The sense of coherence is an important factor influencing the experience of psychological stress and coping with a difficult situation. Certainly, such a situation is a chronic disease that can cause negative emotions.

Life orientation, generally speaking, assumes that the world cannot be guided and made sense. It is a group of people with health problems. In coping with the disease, it is important to undertake actions in the human body. According to the salutogenetic theory, a strong sense of being in the activity, the schemas or resources are enabled, thanks to the action of stressors. People with a higher sense of coherence. Stimuli coming from outside and life events as less stressful. Hence, if a person values, stressors as heavy and burdensome, as a person with a high sense of coherence, as opposed to that with a lower sense. Strong sense of cohrence [18, 21].

The sense of coherence increases in the course of socialization. An important role is played by the societies of the system of originate. Undoubtedly, it can be said that a strong sense of helplessness, lack of willingness to act and tendency to give up. It is strongly associated with the will to fight, resourcefulness and effectiveness [16,18,21].

III. REFERENCES

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